

Application No. 10/603,716  
Atty. Docket No.: 2003B047  
Amdt. dated May 8, 2006  
Reply to Office Action of February 7, 2006

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### REMARKS/ARGUMENTS

Reconsideration of this application is requested. The claims submitted for reconsideration are claims 1-6 and 9-16.

Claim 1 has been amended to include a compressing step as described in detail at paragraph [0120] of the specification. A step of forming a C3- overhead stream is also included as described at paragraph [0121]. In addition, a step of caustic washing the C3- overhead stream has been included in claim 1, which is based upon now canceled claim 8 and the description of paragraph [0122].

Claims 38-58 have been canceled in response to the previous restriction requirement. Applicant reserves the right to prosecute the subject matter of those claims by way of a divisional application. Accordingly, no new matter has been entered by this Amendment and Response.

#### Claim Rejections – 35 USC § 102(b)

Claims 1-4, 7, 10, 12, 13 and 69 were rejected under 35 USC § 102(b) as being anticipated by Miller *et al.*, U.S. Patent No. 6,403,854 (hereinafter Miller). This rejection is traversed and reconsideration is requested.

This invention is directed to reducing corrosion in MTO systems. In particular, the invention provides for a reduction of corrosion in the C3- (e.g., ethylene and propylene) recovery portion of the processing system.

According to the claimed invention, a MTO product stream is contacted with a quench medium in a quench unit to form a light product fraction containing light olefins, a heavy product fraction containing condensed components, and a condensed pumparound stream. A neutralization agent is added to the condensed pumparound stream to form the quench medium. The light product fraction is compressed to form a compressed product fraction, and the compressed product fraction is directed to a C3- separation zone, where a C3- overhead stream and a C4+ bottoms stream are formed. At least a portion of the C3- overhead stream is contacted with caustic in a caustic wash unit and forming a caustic unit overhead stream and a caustic unit bottoms stream. The caustic unit overhead stream contains a majority of the light olefins that

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were present in the light product fraction, and the caustic unit bottoms stream contains at least partially spent caustic

Miller differs from the claimed invention in that Miller does not disclose directing a compressed product fraction to a C3- separation zone, and forming a C3- overhead stream and a C4+ bottoms stream. Miller also does not disclose contacting at least a portion of the C3- overhead stream with caustic in a caustic wash unit and forming a caustic unit overhead stream and a caustic unit bottoms stream. Instead, Miller compresses an entire olefin stream and then caustic washes the entire stream. Following the caustic wash, Miller separates a C2- stream from a C3+ stream.

Applicant's invention results in a substantial improvement over the Miller process in that only a small fraction of the light olefin product is subjected to caustic washing. This reduction is at least partially due to the use of the C3- separation zone prior to caustic wash. This prior separation zone concentrates byproduct materials that are more effectively removed by subsequent caustic washing. Accordingly, Applicants' invention provides a substantial increase in effectively reducing corrosive materials relative to what is taught by Miller. Therefore, Miller fails to disclose or suggest Applicants' claimed invention.

#### Claim Rejections – 35 USC § 103(a)

Claims 5, 6, 8, 9, 11, 14-37, 59-68, and 70-112 were rejected under 35 USC § 103(a) as being unpatentable over Miller *et al.* This rejection is traversed and reconsideration is requested.

The differences between the claimed invention and Miller were discussed above. As also noted in that discussion, these differences are not obvious modifications of Miller. Accordingly, Miller does not suggest the claimed invention.

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### CONCLUSION

Having demonstrated that the cited reference fails to disclose or suggest the invention as claimed, this application is in condition for allowance. Accordingly, Applicant requests early and favorable reconsideration in the form of a Notice of Allowance.

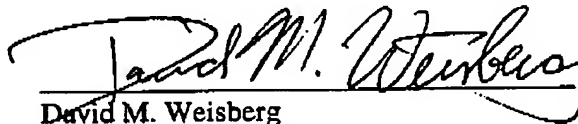
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1712 (Docket #: 2003B047).

Respectfully submitted,

Date: \_\_\_\_\_

5/8/06



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